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Discussions

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Interactive comment on "Addition of a fast GC to SIFT-MS for analyses of individual monoterpenes in mixtures" *by* Michal Lacko et al.

Anonymous Referee #2

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The paper "Addition of a fast GC to SIFT-MS for analyses of individual monoterpenes in mixtures" by Lacko at all, submitted to AMT is work with potential. The addition of FastGC to the SIFT-MS is described in details, acknowledging most of the difficulties that method development brings. However, I find several major issues which prevent me from recommending its publication in AMT.

First, the work is unnecessary long for the amount of information given. Two columns were compared, MXT-1 and MXT-Volatiles, but only the latter one gives acceptable separation. It is clear that MXT-1 is not suitable for this system (too fast separation, with not much control over the retention time). For any future version of the manuscript I suggest avoid the entire sections of MTX-1 column (perhaps it could be briefly mentioned in the supplementary data).

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Second, the detection limit for this system is 100 ppb. Unfortunately, this is not close to the ambient levels of monoterpene concentrations or any plant chamber experiment loads. So, the relevance of this method is not within the scope of ATM, but rather in the fields where the technique can be used (monoterpene concentrations >100 ppb). Thus, I suggest to the authors to consider submitting these findings to a more suitable journal dealing with mass spectrometry techniques in general.

Minor comments: The manuscript in general needs more clarity: E.g. In the Abstract "the headspace of three conifer needle samples was analysed" it is not clear what do you mean here. The abstract should be clear and stand-alone. I believe you mean "needle samples of three conniver species"? P4 L20. "(1 to 8 s)" is it 1 or 8 s you used? Or this is a range you can set? Again, I had to search in the following text to understand this better. P8 L3-10. Not entirely clear enough. How did you enclose the plant branches? You mention temperature stress! But, how long it passed from the cutting? Did you use any light during the measurement?

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